

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2003P09575WO	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/EP2004/050939	International filing date (day/month/year) 27.05.2004	Priority date (day/month/year) 03.07.2003
International Patent Classification (IPC) or national classification and IPC H04L29/06, H04L12/56		
Applicant SIEMENS AKTIENGESELLSCHAFT		

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>5</u> sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>																									
<p>4. This report contains indications relating to the following items:</p> <table><tr><td><input checked="" type="checkbox"/></td><td>Box No. I</td><td>Basis of the report</td></tr><tr><td><input type="checkbox"/></td><td>Box No. II</td><td>Priority</td></tr><tr><td><input type="checkbox"/></td><td>Box No. III</td><td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td></tr><tr><td><input type="checkbox"/></td><td>Box No. IV</td><td>Lack of unity of invention</td></tr><tr><td><input checked="" type="checkbox"/></td><td>Box No. V</td><td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td></tr><tr><td><input type="checkbox"/></td><td>Box No. VI</td><td>Certain documents cited</td></tr><tr><td><input type="checkbox"/></td><td>Box No. VII</td><td>Certain defects in the international application</td></tr><tr><td><input type="checkbox"/></td><td>Box No. VIII</td><td>Certain observations on the international application</td></tr></table>		<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Date of submission of the demand	Date of completion of this report																								
Name and mailing address of the IPEA/EP	Authorized officer																								
Facsimile No.	Telephone No.																								

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:

- ☐ international search (Rule 12.3 and 23.1(b))
☐ publication of the international application (Rule 12.4)
☐ international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):

☐ the international application as originally filed/furnished

☒ the description:

pages 1, 2, 5-9 as originally filed/furnished

pages* 3, 4, 4a received by this Authority on 08.08.2005 with letter of 05.08.2005

pages* _____ received by this Authority on _____

☒ the claims:

nos. _____ as originally filed/furnished

nos.* _____ as amended (together with any statement) under Article 19

nos.* 1-8 received by this Authority on 08.08.2005 with letter of 05.08.2005

nos.* _____ received by this Authority on _____

☒ the drawings:

sheets 1/4-4/4 as originally filed/furnished

sheets* _____ received by this Authority on _____

sheets* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (specify): _____

☐ any table(s) related to sequence listing (specify): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (specify): _____

☐ any table(s) related to sequence listing (specify): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-8	YES
	Claims		NO
Inventive step (IS)	Claims	1-8	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-8	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

The present report refers to the following search report citations:

D1: US-B1-6 452 915

D2: JEONG S-H ET AL: "QoS support for UDP/TCP based networks" COMPUTER COMMUNICATIONS, ELSEVIER SCIENCE PUBLISHERS BV, AMSTERDAM, NL, Vol. 24, No. 1, 1 January 2001 (2001-01-01), pages 64-77, XP004227542 ISSN: 0140-3664

D3: AAD I ET AL: "Priorities in WLANs" COMPUTER NETWORKS, ELSEVIER SCIENCE PUBLISHERS B.V., AMSTERDAM, NL, Vol. 41, No. 4, 15 March 2003 (2003-03-15), pages 505-526, XP004404984 ISSN: 1389-1286

D4: US-B1-6 529 475.

The application relates to a method for controlling data connections for the transmission of data, using data connections assigned to different applications, in a local network having at least two stations designed for data transmission.

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

The problem to be solved by the present invention is that of providing a method which reduces the loss of real-time critical transmission packets with respect to real-time non-critical transmission packets within a station of a local network.

The problem is solved by the fact that a first transmission protocol functions according to a connection-oriented transport protocol and a second transmission protocol functions according to a connection-less transport protocol, the station administer the data packets of the first transmission protocol in a queue and the data packets of the second transmission protocol in a different queue, the transmission times of the data packets are determined according to the assigned transmission protocol, the transmission being carried out in such a way that different priorities are assigned to the transmission protocols.

The prior art describes numerous different systems and methods for controlling data connections for the transmission of data using data connections assigned to different applications in a local network having at least two stations designed for data transmission.

For example, document D1 discloses a system for classifying and prioritizing a packet flow according to the IP protocol in a network. The prioritization on the basis of time-critical and time-non-critical protocols is also described. However, this is achieved in a very complicated manner through the classification or marking

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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of individual IP packets or using applications each terminal or station has to implement. A simple queue prioritization in the stations, which works independently of the local network, is not disclosed.

Although document D2 describes a protocol-based prioritization, this is very complex, using a classification of the packets into separate service quality categories. This makes it more difficult for individual stations to access the network.

Document D3 likewise discloses a system including prioritization of individual network protocols. However, unlike the invention, it solves the problem by parameter variation of the lower layers of the network and a central control unit.

Document D4 discloses a system for controlling and monitoring multimedia services in networks.

Owing to the **decentralized control** in the stations, the advantage of the method according to the invention is that the stations can be incorporated into existing networks with little outlay or modifications to these networks.

In addition, simple processing in only two queues of a station without complicated prioritization through marking of the individual packets in the network reduces the complexity in the station and in the network and is therefore more economical.

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

The simple prioritization in two queues in a station reduces the loss of real-time critical transmission packets versus real-time non-critical transmission packets in a station of a local network. In addition, costs are saved and easy station access to the network is made possible, despite the prioritization.

These features of claim 1 are not disclosed in the prior art, nor can they be directly derived from the above documents.

Independent claim 1 is therefore inventive relative to the prior art documents D1 to D4.

Dependent claims 2-8 contain advantageous embodiments and therefore likewise meet the requirements of PCT Article 33(3).

Claims 1-8 therefore satisfy the requirements of PCT Article 33.